# Exhibit 27

# EXHIBIT 2

## INFRINGEMENT OF U.S. PATENT NO. 6,429,481

### AOS AO4812 POWER MOSFET

| CLAIM | AO4812 POWER MOSFET |
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| 1. A trenched field effect transistor comprising: | The AOS AO4812 Power MOSFET ("the accused device") is a trenched field effect transistor. (Fig. AO4812-1 (datasheet); Fig. AO4812-2 (package marking).) |
| a semiconductor substrate having dopants of a first conductivity type; | The accused device is an N-channel MOSFET, which is therefore formed on a substrate of doped N-type silicon. In the language of the claim, the N-type dopants in the substrate are a "first conductivity type." (Fig. AO4812-1 (datasheet); Fig. AO4812-3 (Scanning Electron Microscopy image), item A; Fig. AO4812-4 (Scanning Capacitance Microscopy image), item A.) |
| a trench extending a predetermined depth into said semiconductor substrate; | The accused device has a trench extending to a predetermined depth into the substrate. (Fig. AO4812-3 (Scanning Electron Microscopy image), item B; Fig. AO4812-4 (Scanning Capacitance Microscopy image), item B.) |
| a pair of doped source junctions having dopants of the first conductivity type, and positioned on opposite sides of the trench; | The accused device has a pair of source junctions (regions) positioned on opposite sides of the trench. (Fig. AO4812-3 (Scanning Electron Microscopy image), item C; Fig. AO4812-4 (Scanning Capacitance Microscopy image), item C.) Because the accused device is an N-channel MOSFET, the source junctions (regions) are formed with N-type dopants, which are dopants of the first conductivity type. (Fig. AO4812-4 (Scanning Capacitance Microscopy image), item C.) |
| a doped well having dopants of a second conductivity type opposite to said first conductivity type, and formed into the substrate to a depth that is less than said predetermined depth of the trench; and | The accused device has a lightly doped well formed with P-type dopants (a second conductivity type opposite to the first conductivity type) that is formed in the substrate, and the depth of the doped well is less than the predetermined depth of the trench. (Fig. AO4812-3 (Scanning Electron Microscopy image), item D; Fig. AO4812-4 (Scanning Capacitance Microscopy image), item D.) |
| a doped heavy body having dopants of the second conductivity type, and positioned adjacent each source junction on the opposite side of the source junction from the trench, said heavy body extending into said doped well to a depth that is less than said depth of said doped well, | The accused device has a highly doped heavy body formed with a higher concentration of P-type dopants (the second conductivity type) that is positioned adjacent to each source junction on the opposite side of the source junction from the trench. The P-type heavy body extends to a depth that is less than the depth of the well. (Fig. AO4812-3 (Scanning Electron Microscopy image), item E; Fig. AO4812-4 (Scanning Capacitance Microscopy image), item E.) |
| wherein the heavy body forms an abrupt junction with the well and the depth of the junction, relative to the depth of the well, is adjusted so that a transistor breakdown initiation point is spaced away from the trench in the semiconductor, when voltage is applied to the transistor. | The junction between the doped P-type heavy body and the well is an abrupt junction. (Fig. AO4812-5 (Secondary Ion Mass Spectroscopy data).) This abrupt junction creates a peak electric field when voltage is applied to the accused device, and the depth of this abrupt junction relative to the depth of the well is such that the peak electric field causes the breakdown initiation point to be spaced away from the trench. |

| CLAIM | AO4812 POWER MOSFET |
|---|---|
| 2. The trenched field effect transistor of claim 1 wherein said doped well has a substantially flat bottom. | The accused device has a doped well with a substantially flat bottom. (Fig. AO4812-3 (Scanning Electron Microscopy image), item D; Fig. AO4812-4 (Scanning Capacitance Microscopy image), item D.) |
| 3. The trenched field effect transistor of claim 1 wherein said trench has rounded top and bottom corners. | The trench of the accused device has a rounded top and bottom. (Fig. AO4812-3 (Scanning Electron Microscopy image), item B; Fig. AO4812-4 (Scanning Capacitance Microscopy image), item B.) |
| 4. The trenched field effect transistor of claim 1 wherein the abrupt junction causes the transistor breakdown initiation point to occur in the area of the junction, when voltage is applied to the transistor. | The abrupt junction in the accused device creates a peak electric field in the area of the junction when voltage is applied, so that the transistor breakdown initiation point occurs in the area of the abrupt junction. (Fig. AO4812-5 (Secondary Ion Mass Spectroscopy data).) |
| 18. The trenched field effect transistor of claim 1 further comprising an epitaxial layer having dopants of the first conductivity type, and formed between the substrate and the doped well, with no buried layer formed at an interface between the epitaxial layer and the substrate. | The accused device has an N-type epitaxial layer (formed with dopants of the first conductivity type) located between the N-type substrate and the lightly doped P-type well. (Fig. AO4812-3 (Scanning Electron Microscopy image), item F; Fig. AO4812-4 (Scanning Capacitance Microscopy image), item F.) There is no indication of a buried layer formed at the interface between the epitaxial layer and the substrate. |

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